High-Technology Acquisitions: An Inquiry Toward the Microfoundations of a Grafting Capability

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CHAPTER FIVE

TRANSFERRING "LEARNING"

ABSTRACT

Acquisitions aimed at accessing new capabilities are taking place increasingly in high-technology industries. Despite their popularity, many of these acquisitions face tremendous challenges in transferring target's capabilities post-acquisition. Prior research has shown the importance of developing a new joint social community when it comes to transferring capabilities post-acquisition. However, the actual micro-level activities that lead to creating such a post-acquisition social community are still absent in literature. This study shows that using the expertise-in-practice theoretical lens to study post-acquisition capability transfer could reveal new insights. Based on a longitudinal case study, this research demonstrates that organizations can create a post-acquisition social community by means of boundary spanners. For boundary spanners to be able to do their work, mutually created boundary objects and various types of capital are necessary. The latter, however, can only be accessed through having a group of boundary spanners.

INTRODUCTION

In high-technology industries, firms increasingly engage in acquisitions to get access to new strategic capabilities (hereafter, "capability-based acquisitions") (Ahuja & Katila, 2001; Amiryany, Huysman, De Man, & Cloodt, 2012; Kapoor & Lim, 2007; Makri, Hitt, & Lane, 2010; Schweizer, 2005). Strategic capabilities (hereafter, "capabilities") "are the skills or knowledge sets of how to manage and combine other resources available to the firm to create competitive advantage" (Ranft, 2006, p. 53). Such capabilities are highly tacit, only partially codified, and predominantly embedded in firms' social capital and, thus, embedded in practice. Therefore, it is difficult for competitors to imitate such capabilities. This is why getting access to these capabilities by means of acquisitions is an attractive option, especially in turbulent environments—given their highly knowledge-intensive activities and the fast-paced change of their business (Bresman, Birkinshaw, & Nobel, 2010; Keil, Maula, Schildt, & Zahra, 2008; Ranft & Lord, 2002).

Getting access to new capabilities through acquisitions, however, does not only have a significant cost; it also has a significant risk of failure (Finkelstein & Cooper, 2010; Graebner, Eisenhardt, & Roundy, 2010; Haleblian, Devers, McNamara, Carpenter, & Davison, 2009). Firms usually struggle when trying to transfer targets' capabilities post-acquisition (Bresman et al., 2010; Puranam, Singh, & Zollo, 2003). Given the importance and difficulties of post-acquisition capability transfer, a growing body of research in the strategic management field has been focusing on understanding *how* to transfer capabilities post-acquisition (Graebner, 2004; Kapoor & Lim, 2007; Ranft, 2006; Ranft & Lord, 2002; Schweizer, 2005). Prior research, populated mostly by qualitative researchers, has revealed that to transfer the capability in question, it is important to not disrupt the routines and social capital of the acquired firm that created the capability in the first place. Therefore, the acquiring firm should give some degree of autonomy to the acquired firm. However, this leads to a dilemma because the acquiring firm must integrate the acquired firm to get access to its capability and give it autonomy to preserve its capability (Graebner et al., 2010; Haspeslagh & Jemison, 1991; Puranam & Srikanth, 2007; Ranft & Lord, 2002). This dilemma has led researchers—though sometimes indirectly—arguing that the post-acquisition integration process consists of two phases (Birkinshaw, Bresman, & Håkanson, 2000; Bresman, Birkinshaw, & Nobel, 1999; Bresman et al., 2010; Schweizer, 2005). The first phase consists of task integration, which is meant to enhance effective functioning of operational activities. Task integration, however, does not lead to capability transfer, but it is

a more satisfying solution in terms of post-acquisition collaboration. The second phase deals with social issues and, thus, human integration, which leads to creating the needed social relationships by means of mutual respect and understanding (Birkinshaw et al., 2000). It is the second phase that creates value for capability-based acquisitions because employees start to collaborate based on the created relationships and, therefore, become willing to transfer the highly tacit capability in question (Birkinshaw et al., 2000; Bresman et al., 1999, 2010; Schweizer, 2005). Building a new joint social community while dealing with political and motivational issues post-acquisition have been recognized as being important by this stream of research and in dealing with these issues the role of managers has been mentioned to be key (Birkinshaw et al., 2000; Bresman et al., 1999, 2010; Graebner, 2004; Graebner et al., 2010; Schweizer, 2005; Verbeke, 2010).

Although the previous factors provide some insights into how to make the post-acquisition process more successful, many issues remain. For example, we do not know which micro-level activities create a new joint social community. We also do not know how to deal with political and motivational issues that could hinder the creation of such a social community and involvement of managers. In addition, there is the question of what kind of authority firms should give to key knowledge-workers post-acquisition and how to integrate these workers into the larger firm. In other words, we do not know what the actual dynamics of post-acquisition capability transfer are. Thus, many questions remain (e.g., Barkema & Schijven, 2008).

Answers to these questions could only be obtained from an in-depth, micro-level investigation of the post-acquisition capability transfer process. An in-depth study could reveal how capabilities are being transferred post-acquisition and, thus, what the actual dynamics of capability transfer are. Such in-depth studies are rare in strategic management literature. There have been recent calls for conducting more research on the microfoundations of capabilities in general (Felin, Foss, Heimeriks, & Madsen, 2012) and knowledge sharing processes in particular (Foss, Husted, & Michailova, 2010). This study addresses these calls based on a case study research in the IT industry. In doing this, we take into account that rich insights into the micro-level processes can be found in the qualitative work on collaboration and on knowledge creation and sharing processes within and across organizational boundaries (hereafter, "expertise-in-practice"), which could inform scholarship on post-acquisition capability transfer (Carlile, 2002, 2004; Gherardi, 2000; Levina & Vaast, 2005; Orlikowski, 2002).

In other words, the expertise-in-practice literature is focused on the actual micro-level activities employees are engaged in and could inform recent calls in the strategic management field. This is because experts-in-practice research considers capabilities to be embedded in organizational practices, situated in actions, and highly contextual (e.g., Cook & Brown, 1999; Gherardi, 2000; Orlikowski, 2002; Tsoukas, 1996). For them, the capability transfer problem becomes a problem of learning expertise across boundaries by acquiring new tacit understanding, implementing new routines, developing new artifacts, and renegotiating power structures because people have stakes in routines and learning they have already done. In this process of learning across boundaries, developing a new joint social community is important and in developing such community, the role of boundary spanners—that is, employees who are able to facilitate expertise transfer across boundaries of communities by connecting these communities with each other—is key (Levina & Vaast, 2005). In addition, for these boundary spanners to be able to do their work, boundary objects—that is, certain artifacts that are adaptable enough to meet the needs of the new context but robust enough to maintain a common identity—are crucial, and having access to certain forms of capital such as economic (e.g., time) and cultural (e.g., professional expertise) is vital (Levina & Vaast, 2005). In other words, expertise-in-practice literature has some parallels with post-acquisition integration literature. Specifically, it values the importance of a new joint social community for transferring capabilities across boundaries, as the post-acquisition literature does. However, expertise-in-practice literature extends the discussion on developing a new joint social community by recognizing that capabilities are embedded in practice and by elaborating on the importance of boundary spanners, boundary objects, and various forms of capital for transferring capabilities across boundaries. Thus, expertise-in-practice literature could be a useful lens with which to study post-acquisition capability transfer and extend existing theory in this field. Taking this into account, through this study we strive to answer the question "what are the dynamics of post-acquisition boundary spanning?" while using the theoretical lenses of post-acquisition integration and expertise-in-practice.

To anticipate the findings, this study illustrates that the expertise-in-practice research can inform post-acquisition literature and that using a post-acquisition context can provide useful insights for the expertise-in-practice research. First, this study argues that firms can enhance post-acquisition boundary spanning by developing a new joint social community. Firms can create this new joint social community by appointing boundary spanners who are involved in

the actual practice, by ensuring that employees are mutually creating and using boundary objects, and by providing access to all forms of capital. Thus, the expertise-in-practice lens reveals that the concepts of boundary spanners, boundary objects, and different types of capital can be useful in understanding how to create a post-acquisition social community beyond merely using rich communication and leadership—as post-acquisition literature has already described. Furthermore, this study extends existing expertise-in-practice theory by arguing that to get access to all forms of capital, organizations need a group of boundary spanners—not just a few. In addition, this study also extends existing expertise-in-practice theory by highlighting the important role of institutional partners in the process of capability transfer across boundaries. Institutional partners have an important role in this process because they exert pressure on the newly formed post-acquisition firm to work according to their standards—for example, to get certifications that only one of the firms had before the acquisition. This requires the newly formed firm to get involved in boundary spanning post-acquisition to meet such partners' needs. Therefore, this study shows that using an acquisition context reveals the importance of aspects that have not been previously discussed in the expertise-in-practice literature and thus can inform this stream of research.

In the next sections, we will first discuss the literature on post-acquisition integration and expertise-in-practice. Second, we will explain the methodology of our research. After discussing our methodology, we will elaborate on the data while showing how post-acquisition capability transfer took place within an acquisition in the IT industry. Finally, we will provide some concluding remarks.

THEORY

The following subsections will, first, review literature on post-acquisition integration to explain how firms can achieve capability transfer. This literature stream demonstrates the importance of developing a new joint social community post-acquisition for transferring the capability in question. This literature reflects the importance of dealing with political and motivational issues while taking into account local needs, using rich communication, and leadership. Second, we review the expertise-in-practice literature. This literature stream acknowledges the importance of a joint social community for transferring capabilities across boundaries. For transferring such capabilities, however, the expertise-in-practice literature recognizes the importance of boundary spanners, boundary objects, and various types of capital. Therefore, it is argued that this literature stream could inform post-acquisition

literature by providing additional insights on how a new joint social community can be created and, thus, how capability transfer can be achieved.

Post-acquisition Integration

As mentioned earlier, prior research on post-acquisition integration has revealed that acquiring firms have to deal with a dilemma of autonomy vs. integration, post-acquisition. On the one hand, to avoid disrupting an acquired firm's routines and social capital—which have created its capability in the first place—it is important to give it the needed autonomy (Graebner et al., 2010; Haspeslagh & Jemison, 1991; Puranam, Singh, & Chaudhuri, 2009; Ranft & Lord, 2002). On the other hand, to get access to the acquired firm's capability, the acquiring firm needs to integrate it within its own firm (Graebner et al., 2010; Haspeslagh & Jemison, 1991; Puranam & Srikanth, 2007; Ranft & Lord, 2002). To understand how to deal with such integration dilemmas, some researchers have been arguing for a hybrid approach that involves rapidly integrating less knowledge-intensive activities and giving autonomy to more knowledge-intensive activities (Graebner et al., 2010; Schweizer, 2005). Therefore, there seems to be a consensus on having to deal with two distinct activities post-acquisition when it comes to highly tacit capabilities.

Following this line of reasoning, Bresman et al. (1999, 2010) found that post-acquisition integration takes place first as a one-way expertise transfer from the acquirer to the acquired firm. However, in time, when the employees have developed the necessary relationships, willingness to collaborate, and, thus, a new joint social community in which both employees of the acquired and acquiring firms are involved, reciprocal expertise transfer takes place. The main reason for this enhanced integration in this study was that the acquiring firm pushed for rich face-to-face communication to enhance integration; this improved the acquired employees' perception of the acquirer and enhanced the development of relationships among employees. Other studies have also confirmed this phenomenon (Cummings & Teng, 2003; Graebner et al., 2010; Ranft & Lord, 2002; Zander & Zander, 2010).

Birkinshaw et al.'s (2000) study also shows a two-phase process of post-acquisition integration—that is, task integration and human integration. First, firms engaged in task integration efforts that did not lead to desired achievements but only to a certain satisfactory state that ensured effective functioning of activities. Human integration efforts, however, led to more desirable integration by enhancing mutual understanding. This led to the

development of a new joint social community post-acquisition in which employees of both firms collaborated based on the relationships they developed over time (Birkinshaw et al., 2000; Verbeke, 2010). However, after the firm had almost completed the human integration efforts and had developed a new joint social community, a second phase of task integration took place three to five years after acquisition. This phase focused on creating interdependencies between the knowledge-intensive activities of the firms and led to value creation. Therefore, the new joint social community enhanced effective task integration. However, developing a new joint social community was extremely difficult to achieve and took six or seven years.

To enhance the development of a new joint social community, taking into account that employees have a focus on local needs has been mentioned to be an important aspect. Viewing post-acquisition integration as a sense-making process, Vaara (2003) found that managers involved took their own unit's perspective when tackling integration issues and were making sense of the implications for their own firm. In addition, when facing organizational reality, integration issues seemed to be lost in the normal management of the firms, leading to a loose coupling of rhetoric and action, resulting in organizational hypocrisy. Furthermore, an important aspect of the sense-making process was that issues that were debated for a longer time became politicized. This led to actors arguing for their own agendas. This was especially the case when issues concerned the future of the specific unit. This focus on local needs by Vaara (2003) is also evident in the case of Meyer and Lieb-Dóczy (2003). The authors argue that managers did not embrace trainings provided by headquarters because the trainings did not address local needs, leading to acquired managers pursuing their own agendas. This study once again underscores the importance of managerial action post-acquisition. Therefore, dealing with political and motivational issues while focusing on local needs post-acquisition is important, and in this process the role of managers is vital.

The important role of acquired managers in facilitating the integration process, has been also mentioned by Graebner (2004). According to Graebner (2004), the acquired firm's managers had an important role in realizing both expected and serendipitous value post-acquisition. On the one hand, they created expected value by mobilizing and mitigating actions of managers involved. On the other hand, these managers were also able to create unanticipated value by discovering new paths for value creation. Such opportunities were capitalized when employees were involved in cross-organizational responsibilities. Thus,

these acquired managers acted as a linchpin in the integration process, had a holistic view of the acquisition, and showed leadership while enhancing collaboration (Bannert & Tschirky, 2004; Schweizer, 2005).

As we have seen, prior studies show that transferring capabilities across firms' boundaries is not an easy task. Building a new joint social community in which employees of both firms are involved, while dealing with political and motivational issues, is extremely important for enhancing capability transfer post-acquisition. In doing so, rich communication and the role of managers seems to be key. However, some questions remain such as "What micro-level activities lead to creating such new joint social community?" and, "What are the dynamics that lead to transferring capabilities across boundaries?" As mentioned in the introduction, the expertise-in-practice literature could inform post-acquisition integration literature on these issues. The next section elaborates on the expertise-in-practice literature.

Expertise in Practice

Rich insights into the micro-level processes can be found in the qualitative work on expertise-in-practice (Carlile, 2002, 2004; Gherardi, 2000; Levina & Vaast, 2005, 2008; Orlikowski, 2002). This tradition of research depicts capabilities as being embedded in organizational practices and describes capability transfer as a problem of learning expertise across boundaries by developing a new joint social community (e.g., Carlile, 2002, 2004; Levina & Vaast, 2005; Levina & Vaast, 2006). Although researchers have not used this literature to understand the post-acquisition capability transfer phenomenon, related work on coordination and collaboration across boundaries, the evolution of routines, and distributed work can inform scholarship on post-acquisition capability transfer. For example, Kostova (1999) mentions that some barriers for transferring capabilities are practice specific, whereas others are of a cultural and organizational nature. In many cases, managers are frustrated with transfer requests, decide not to implement practices while reporting otherwise, implement them partially, or just do not believe the parent company's motives. In addition, transferring capabilities depends on the employees in the receiving unit who eventually must use these capabilities. Because of their strategic importance, such capabilities are infused with values that contain symbolic and normative meaning. Therefore, transferring capabilities also involves creating shared meaning and value between involved parties.

Swap, Leonard, Shields, and Abrams (2001) mention that transferring capabilities within and across the firm is especially difficult because of their tacit aspect. The most critical part

of such capabilities is built up over time in people's heads, hands, and relationships (Leonard & Swap, 2004; Swap et al., 2001). Transferring such capabilities is difficult because they are based on dynamic, unstable, and subtle processes. Internalization and socialization through informal processes such as mentoring and story-telling could help transfer such tacit capabilities. Carlile (2002, 2004) extends these discussions by arguing that capabilities are both a source of innovation and a barrier. The same characteristics deemed important for solving problems within a certain function can be problematic for developing expertise across boundaries. This is because much of what firms produce is based on highly specialized capabilities, leading to capabilities being localized, embedded, and invested in practice. Because of this contextualized nature of capabilities, there are three boundaries identified by Carlile (2004) that could impede capability transfer. These are syntactic (e.g., language), semantic (e.g., interpretations), and pragmatic (e.g., contextual framework) boundaries. Boundary objects—such as repositories, standardized forms and methods, and objects, models, and maps—could help overcome such boundaries that capabilities face. Using such boundary objects is both practical and political: practical by creating the necessary syntax and interpretations and political by facilitating the transformation of current expertise so that new expertise can be created.

Levina and Vaast (2005) found that spanning such boundaries requires a new joint social community that can be created by boundary spanners-in-practice—people who are able to adjust their practices to fit with local settings and meet the demands of multiple parties. These boundary spanners-in-practice use and produce locally useful objects that have a common identity within the newly developed social community—objects that these researchers term boundary objects-in-use. These objects have three distinctive aspects: (a) they have interpretive flexibility, (b) they contain the structure of work arrangements, and (c) they are suited for ill-structured and more tailored use (Star, 2010). Therefore, organizations can use such objects for bridging work while allowing similarities and differences to coexist (Nicolini, Mengis, & Swan, 2011).

Levina and Vaast (2005, 2008) have developed a number of ideas about what it takes to become effective at boundary spanning. First, they argue that three conditions are necessary for boundary spanners to be effective in practice. These are being a legitimate participant in both fields by having at least a peripheral understanding of both fields; having the legitimacy to negotiate for both fields by having the required resources, which is symbolic capital (e.g., having the ability to name other resources as being valuable); and having an inclination to

become a boundary spanner-in-practice, which may stem from the advantages that come with it. In their later work, Levina and Vaast (2008) argue that to be able to carry out their activities, boundary spanners-in-practice use a variety of resources including symbolic capital associated with their nomination to play the boundary spanning role, as well as economic (e.g., time), cultural (e.g., professional expertise), and social capital (e.g., an expert's social network) that they control.

In recent development of the boundary objects literature, it is argued that objects perform three different tasks: they motivate collaboration, they enable working across different boundaries, and they create the infrastructure of a certain activity (Erkelens & Van den Hooff, 2012; Nicolini et al., 2011). Objects generally acquire their meaning and performative character over the course of their lives (Nicolini et al., 2011). Therefore, it is important to understand when objects are being used, in order to know whether they would support or hinder collaboration. The latter has also been evident in the study of Barrett and Oborn (2010) who found that over the course of time a certain boundary object shifted from being flexible to being rigid and thus hindering collaboration and stimulating conflicts. This process, which involved politicization, eventually inhibited employees from sharing expertise. Furthermore, an interesting aspect of Nicolini et al.'s (2011) study is that cross-boundary interaction sessions that contained open objects—those objects that presented a puzzle or required further investigation—had higher participant attendance. This is an important observation because it recognizes the importance of the use of objects. This is because, as Nicolini et al. (2011) note, many collaborations assume the need for intrinsic motivation. However, their study suggests the importance of the object in place. Therefore, when aiming to enhance collaboration, one needs to question whether the object being used is appealing enough. This is because the object probably works at a primary level and, thus, is vital for enhancing collaboration. This observation is also in line with the work of Barrett and Oborn (2010).

In sum, prior work in the expertise-in-practice field has recognized the situated nature of capabilities in practice and the importance of joint social communities. In addition, expertise-in-practice research has recognized the important role of boundary spanners-in-practice and the conditions necessary for enabling them, the value of boundary objects-in-use, and the primary role that such objects can have in developing a new joint social community while dealing with highly tacit capabilities embedded in practice. Therefore, it seems that this literature stream could provide some additional insights on how to enhance the development

of a post-acquisition social community and, thus, enhance post-acquisition capability transfer. In the following section, after discussing the methodology of our research and the data of our case study, the theoretical lenses of post-acquisition integration and expertise-in-practice will be used to analyze the case, in order to understand how post-acquisition boundary spanning took place. Finally, some concluding remarks will be given.

METHODOLOGY

In order to gain deeper insight into the actual capability transfer process an in-depth understanding of the phenomenon under study is required (Yin, 2009). Therefore a theory-building case study methodology has been used (Eisenhardt, 1989). In-depth understanding based on a theory-building case study can be gained through collecting qualitative data in the field while exploring the phenomenon under study. Given that little is known about the capability transfer process, qualitative data could serve as stimuli to guide and inspire new ideas to extend existing theory (Suddaby, 2006; Sutton, 1997; Yin, 2009). Thus, the aim is to advance the field's theoretical understanding of the post-acquisition capability transfer process while using an inductive approach (e.g., Bansal & Roth, 2000). This approach ensures methodological fit regarding our research because we can learn about nascent theory best by conducting open-ended inquiry (Edmondson & McManus, 2007). Central to our exploratory approach is our single-case research design (Langley, 1999; Yin, 2009). The rationale for using this single-case design is that we wanted the data to help us find underlying process mechanisms regarding the phenomenon under study, for which a single-case study is an appropriate approach (Eisenhardt & Graebner, 2007; Langley, 1999).

Since we were interested in micro-level activities, the unit of analysis of our study was the "group" (Yin, 2009). In this case the group of interest consisted of the employees of acquired company and the employees of the acquiring firm with whom they collaborated. Data collection took place over a five-month period during which we conducted 41 interviews with the employees of the acquired and acquiring firms. A year later we conducted 6 additional interviews with a group of employees that had taken the initiative to enhance the transfer of the capability in question—that is, the "employee initiative group"—to see what their experiences have been. This resulted in a total of 47 interviews. Table A1 in the Appendix offers an overview of the interviewees. On average, the interviewees were 1.5 levels away from the CEOs of the acquired and acquiring firms. Except for 7 interviews (via phone), we conducted all interviews in person, averaging 45 minutes to an hour in length. We

started with 17 open-ended interviews with employees of the acquired and acquiring firms (Rapley, 2001). We based our selection of employees on two aspects: (1) whether they conducted knowledge-intensive activities and (2) whether they were involved in a project group that consisted of employees from both companies. During these interviews we made no tape recordings but took detailed notes (Bansal & Roth, 2000). We avoided taping so we could create the context necessary for the interviewee to feel free and unrestricted in talking about the subject of the study and build a trusting relationship with the interviewer. For these interviews, we used a simple protocol that entailed only five questions, which helped us conduct interviews that were broad in scope, to address various issues (Bansal & Roth, 2000). The protocol contained questions regarding the department to which the employee belonged, his/her position, his/her day-to-day activity, whether the employee needed the expertise of an employee of the acquired or acquiring company, and how expertise transfer took place according to him/her. Subsequently, we asked some follow-up questions, such as "What do you mean by that?" and "Could you elaborate on that?" These helped us probe more deeply and clarify the issues the employee mentioned (Bansal & Roth, 2000; Rapley, 2001). Following this strategy resulted in interviews covering diverse subjects. The only rule we instituted for these interviews was "let the subject talk," which required minimal interactional involvement of the interviewer (Rapley, 2001).

We used these interviews to identify the most important aspects of the knowledge transfer process to define the scope of subsequent interviews. Therefore, first-round interviews provided input for the interview protocol of the second round. In addition, during these interviews the interviewees referred us to other employees with whom to talk in the second round. Our analysis of the first-round interviews revealed that it was not only expertise that the acquirer was trying to acquire but also the underlying learning practices that created the capability of the acquired firm. Therefore, for the second round of interviews, we first addressed a topic-initiating question to introduce the topic of interest so we could have more focused interviews (Bansal & Roth, 2000; Rapley, 2001). Our topic of interest was the capability of the acquired firm and its underlying learning practices. We followed up these questions either by a predefined question regarding the dynamics underlying this capability or by a nonpredefined question focusing on the implications of the interviewee's answers.

We used an iterative process of constant comparison to select the most important concepts emerging from the data inductively, which included collecting and analyzing data simultaneously (e.g., Hitt, Harrison, Ireland, & Best, 1998; Suddaby, 2006). This iterative

process guided our data collection process because the theory we were constructing determined which data we would gather next (Bansal & Roth, 2000; Suddaby, 2006). ATLAS.ti, scientific software for analyzing qualitative data, enabled us to use open coding to address data to provisional categories and, thus, first-order codes (e.g., Agterberg, Van den Hooff, Huysman, & Soekijad, 2010; Pratt, Rockmann, & Kaufmann, 2006). When no more new codes emerged, we moved to axial coding (Agterberg et al., 2010; Pratt et al., 2006). During this stage we consolidated categories, which led to more theoretical and abstract categories and, thus, second-order codes (Maanen, 1979; Pratt et al., 2006; Spiggle, 1994). In addition to interviews, we used unobtrusive measures to supplement and cross-validate interview data—to triangulate data (Webb & Weick, 1979). This approach helped ensure that data gained from interviews were not a reflection of self-reports or socially desirable answers of the interviewees. Therefore, by triangulating different data sources we ensured the convergent validity of our findings (Agterberg et al., 2010). These unobtrusive measures were archival data (e.g., architecture designs), episodic records (e.g., R&D plans), and simple observations (Alison, Snook, & Stein, 2001). The latter included the first author of this study being on-site two days a week for five months, observing employees' day-to-day activities and attending gatherings such as meetings, brainstorming sessions, and social events (e.g., Bansal & Roth, 2000). In addition, to ensure the communicative validity of our results, we also presented our findings from the first round of interviews to three interviewees to make sure we were on the right track and that our findings were in accordance with their views. Finally, after the second round of interviews, we also presented our findings during a meeting to all the interviewees, who supported our observations and indicated that our findings were in accordance with their views (e.g., Agterberg et al., 2010).

CASE DESCRIPTION

Mictech, a small firm consisting of fewer than 40 employees, has been well known during the past decade in the Dutch IT-services industry for having highly specialized skills, innovation capabilities, and efficiency in providing complex solutions for IT-infrastructure problems. The software industry within which Mictech operated included such firms as HP, Microsoft, VMware, and Citrix. Mictech used these firms' technology solutions to help its clients develop IT infrastructures but focused mainly on Microsoft technologies. A small part of the business also included managing clients' IT infrastructure ("managed services"). Specifically, it focused on developing infrastructure for unified communication, server

platforms, virtualization, and system management, among others. Being a Microsoft (MS) Gold partner and having several employees certified as MS Most Valuable Professionals were a couple of the factors that enabled Mictech to achieve recognition in the marketplace.

Mictech did not build its legacy overnight. The founder of Mictech, who also served as its chief technology officer (CTO), had recognized a long time before that because of the rapid technological change in the software industry, the key to staying ahead of the competition was to stay on top of new technologies. The CTO put great effort into building a firm-wide "capability for learning new technology," which he and other leaders refined over the years. Mictech's CTO recalled in an interview:

> We have actually spent about four years on developing and on working on it [our capability for learning new technology], to give it the right shape. Especially in collaboration with the more senior employees, because you need them, too, to pull this off.

Mictech's capability was rooted in learning practices that allowed it to accumulate experience as well as articulate and codify knowledge related to the newest technologies, such as cloud computing. The choice of which technologies to pursue was set for the coming year by Mictech's CTO based on his market analysis and discussions with technical experts. Specific practices, such as charging employees with learning about a particular technology by participating in MS's Technology Adaptation Programs (TAPs), designating a generous budget for attending conferences, and reading up on the latest technologies, provided tacit experiences with the chosen technologies. Employees joined expertise teams that focused on a specific technology. Mictech had invested in a testing environment in which employees could improve their understanding of the technology through experimentation. These employees were charged with creating reusable templates that specified procedures and reusable code related to implementing a particular technology. They were also responsible for conducting teaching sessions that would help other employees learn new technologies. The employees stored these templates and related documents on a shared collaboration platform implemented on MS SharePoint technology.

The 31-page document, called the "R&D plan," reflected Mictech's vision of learning and documented which technologies were strategic in the current year. It also functioned as a guideline for expertise teams regarding which events and courses to attend to develop knowledge, where to find the needed template formats (with specific URLs on MS SharePoint), and where to store the newly developed templates. It specified which deliverables the expertise teams were to produce, including customer demos, knowledge

sessions for colleagues, etcetera. Client-facing teams would draw on documents produced by expertise teams in daily operations. The goal of the R&D plan states the following:

> Mich-tech distinguishes itself in the market by using a proven project approach, no-nonsense mentality, but also especially by having in-depth technical knowledge. Mictech is one of the most innovative companies in the Netherlands. In order to assure this and expand further, a Research and Development structure has been set up. Research and Development within Mictech is responsible for transforming products—that are seen as being strategically valuable to Mictech—to programs and activities that would contribute to developing knowledge and deliverables. The deliverables support Mictech's internal (standards, templates, methods, techniques, and etc.) and external operations (product descriptions, case studies, presentation materials, and etc.). (Mictech's R&D plan).

Mictech used a personnel development plan (PDP) to incentivize employees to work according to the R&D plan. The PDP contained a special section devoted to knowledge development linked to the R&D plan deliverables. Employees were monitored on their efforts in developing knowledge such as through training activities, investing in documentation of best practices, and attaining external certifications. They were given time in their work schedule (an average of 20 percent) for knowledge building activities. The following quotation from a Mictech technical consultant highlights the additional bonuses tied to following the R&D plan:

> Some things, I must admit, are just woven into your PDP and a bonus is attached to them. So if you [for example] write your weeklies [a short note about which challenging tasks you have faced this week and how you resolved them] and keep up with your blogs like a "good boy," then you get recognized and rewarded for that.

In summary, by having a highly structured approach to accumulating experiences and articulating and codifying knowledge, Mictech was able to stay ahead of competitors in their ability to advise clients on the newest technologies and thereby charge premium hourly rates. Moreover, Mictech's development of reusable templates and other documents allowed it to deliver projects efficiently, leading to a steady demand for its services. Mictech's CEO summarized the key drivers of Mictech's market success in the following way:

> Making sure that people get education time, do exams, and get certificates. Preferably, having a few pioneers with the highest certificates. [You know] that we have MVPs [Microsoft's Most Valuable Professionals]. Those are people that distinguish themselves by solving the problems of others—technical problems—and then blogging [about it]. And knowledge sessions, having them in such a way that every month knowledge transfer—related to certain fields—takes place structurally.

The Acquisition and Implementation of Mictech's Capability

Phase 1: The first year (January 2010–December 2010)

IT-infra was a 100-employee division of a larger (1,500-employee) consulting services firm. IT-infra's business is to provide IT infrastructure development and maintenance services to clients. On January 1, 2010, IT-infra acquired Mictech. IT-infra was in the same technological space as Mictech—delivering IT infrastructure services in a variety of technical areas. A greater part of its business was in the managed services area, maintaining clients' existing systems rather than building new systems. Unlike Mictech, which worked on time-and-materials contracts, IT-infra worked on fixed-price contracts. IT-infra was an entrepreneurial organization that had grown fast in the prior decade, especially because of the successful business development efforts of the current divisional CEO (henceforth, "CEO"). The CEO ran IT-infra in a centralized manner, maintaining control over the majority of key decisions.

IT-infra acquired Mictech for two major reasons: to get access to Mictech's expertise in a particular technology area, represented in Mictech's people, processes, and documentation; and to copy Mictech's capability for learning new technology. In an e-mail message sent to all employees about the acquisition, IT-infra's CEO outlined 11 strategic priorities for the combined firm, 7 of which had to do with implementing Mictech's learning practices throughout the whole firm. The CEO's e-mail emphasized the importance of paying attention to the environment:

> The economy is not at its best. We cannot just lay back and relax. We must stay alert to all the possible chances in the market, both at the existing clients and at the new ones. The clients must have the feeling that having an IT-infra employee, is an important ingredient that leads to success.

Immediately following the acquisition, the first attempt to transfer Mictech's learning practices to the new IT-infra was to charge Mictech's technical consultant and Mictech's former CTO, in collaboration with two IT-infra employees, with writing an adjusted version of Mictech's R&D plan for the combined firm. In addition, Mictech's former CTO wrote an adjusted version of Mictech's PDP to ensure that employees would have the necessary incentives to work according to the R&D plan.

The first problem with replicating Mictech's practices surfaced when the R&D coordinators, who had been organizing monthly knowledge sharing sessions, struggled with poor attendance. In May 2010, some R&D managers organized a brainstorming meeting to address this problem. In the session they realized that the key problem with the attendance

was that the R&D knowledge sharing efforts were not embedded in the firm's other activities. For example, employees did not have time or incentives to attend these sessions. There was no easy way to share documents through an IT-based collaborative system because only Mictech's old employees were on this system. The hardware to build a testing environment similar to Mictech's was purchased, but the environment was not put to use, because employees did not get dedicated time (outside their consulting work) to use it. Furthermore, the knowledge sharing sessions were not on cutting-edge technical topics; instead, they focused on topics of general interest. It became clear that for these sessions to work, many changes had to take place.

Almost at the same time, in May 2010, senior leadership of the firm had a strategy session in which the CEO reiterated the importance of establishing Mictech's learning practices within IT-infra. The CEO emphasized the importance of putting the testing environment to use, changing HR practices to create better incentives for learning, communicating knowledge better, and designating technology experts.

After a few slow summer months, in September 2010, the CEO appointed an HR employee, who had joined the firm recently, as a point person to coordinate employees' efforts when they wanted to engage in knowledge-related activities. For example, employees could contact this person if they wanted to lead a knowledge session or write a blog. Because the new point person did not have a technical background and was new to the firm, she struggled to coordinate knowledge sharing sessions as she did not understand the technical language and could not figure out the relevant audience. She had to contact others for help often, and the quality and attendance of the sessions did not improve. She decided to send out a survey to evaluate employees' experience following a knowledge session. The results showed, once again, that the knowledge sessions were not embedded in other organizational practices (e.g., employees complained about the lack of relevance of some of the sessions or the lack of time to participate in them).

In addition to appointing the new point person, IT-infra made no other organizational changes. However, the CEO continued to emphasize the importance of implementing the new learning practices in his regular communications with employees through newsletters, e-mails, and other means.

Some of the difficulties surrounding the transfer of Mictech's learning practices were revealed during a technical board meeting in the same September 2010. During this meeting, IT-infra people criticized Mictech's former CTO for having created an "overly complex"

design for the new testing environment that the CEO committed to implement as part of the capability transfer process. Mictech's CTO was taken aback by this attack because his design was based on the assumption that the environment should be suited for the latest and greatest technology, as was the ideology at Mictech. IT-infra people were not sure such a level of sophistication was necessary, suggesting a simpler, "less-advanced" approach. The technical board meeting revealed the fundamental difference in the mentality of the employees of each firm:

> We always go for the best of the best. That has always been the philosophy of Mictech. (Mictech's CTO)

In November 2010, the management of the combined firm formed a taskforce of ten people to define the firm's cloud computing (a new "hot" technology) strategy. This taskforce consisted of both Mictech and IT-infra technical consultants. This was the first time employees of both firms had to collaborate on a new strategic initiative. During the working meetings of the taskforce, it became clear to IT-infra employees that Mictech people had developed deep technical expertise in multiple domains that they could rely on in addressing new challenges associated with cloud computing. IT-infra people appreciated the insights that such deep technological expertise enabled in dealing with new technologies and felt that whatever Mictech was doing to create such deep experts was worth paying attention to. Moreover, IT-infra people realized that had Mictech's practices been adopted within IT-infra earlier, "you would have had that part of cloud computing early on the agenda" (IT-infra's project manager).

When the taskforce finished its work in December 2010, four members of the taskforce decided to take it upon themselves to establish Mictech's learning practices within IT-infra. Two other people joined them. Four of these six employees were technical consultants who saw the added value of Mictech's approach to developing and maintaining their skills. The other two of the six employees were project managers who saw the added value of Mictech for delivering projects and getting new business.

These employees occasionally consulted with the CTO (the original author of Mictech's plan), but the CTO did not get heavily involved with the group. He had many reasons for not leading on this issue. First, the CTO had been trying to implement Mictech's approach from day one of the acquisition, but did not succeed and was a bit discouraged. Second, the CTO was fully occupied with client-facing work. Third, the CTO had sold Mictech because he did

not want to be involved with organizational issues and wanted to focus on technical challenges.

The six consultants (hereafter, "employee initiative group") together created a new document they termed "IT-infra's Knowledge Management"—a lean version of the combined R&D plan created almost a year prior—to implement Mictech's approach within IT-infra. This document mentioned that the goal of the group was to update and increase employees' knowledge, while also stimulating team spirit and collaboration. The following quotation from a retrospective interview elaborates on this point:

> Recently we have said like, "Ok guys, the ones that really want it and like it and want to pull this off, we are going to bring these knowledge sessions to life." Just us, consultants. Because, if management doesn't do anything regarding the integration [of knowledge development activities], then it is going to disappear and that [which disappears] is the special characteristic of Mictech!" (Mictech's Technical Consultant)

A year into the acquisition, indeed most employees admitted that the R&D plan and the PDP were not implemented at IT-infra. The following interview quotation from a Mictech technical consultant involved in writing the combined firm's R&D plan summarizes the situation:

> …. a year ago when the acquisition was announced, I sat with two IT-infra employees to compare what they did related to R&D and what Mictech did, so to say. We have compared that, but it [the adjusted version that has been written primarily by me] has never been picked up!

The PDP document was not tied to HR instruments; thus, the specific practices it dictated, such as rewards for teaching and blogging about new technologies, were not tracked. One Mictech technical consultant commented on the differences between the old Mictech incentives for learning and the new IT-infra's lack thereof:

> They [IT-infra] don't have a PDP ... because you don't have that, you don't have a reason to keep up with that knowledge-level. So this [positive] cycle stops actually!

Phase 2: The second year (January 2011–January 2012)

At the beginning of the second year, the CEO decided to drop Mictech's name from the firms' daily life and insist on using a single "IT-infra" name. He tried to claim that the integration was complete and successful, but many employees reported in interviews that it was not the case:

> I find indeed the collaboration [between IT-infra and Mictech], as it is now, not going that smoothly, so to say." (IT-infra's technical consultant)

In January of 2011 there was, however, one significant development. IT-infra successfully piloted a new technology (MS Office Communicator product called Lync) in the new testing environment, with IT-infra's CEO being the first pilot user. Having experience with this technology allowed the firm to showcase it to its customers. Mictech's employees used the new testing environment to enable this successful pilot. This episode had proven again to IT-infra senior management the benefits of Mictech's capability for learning new technology:

> Mictech had with a few partners or even suppliers … they had built a nice innovation ecosystem with which they could test beta releases. Actually, all the beta programs, even before they become a release candidate and come to the market, are being tested by these guys and innovation feedback is given by them [to MS] so that they can even innovate and improve [the products] more, in order to get [them] in the market! That gives you, of course, a big advantage when compared to the competitors. (IT-infra's CEO)

While the CEO continued to express verbal support, no real changes in practice occurred. Since their initial meetings in December 2010, members of the employee initiative group were preoccupied with their daily tasks on client projects and did not voice their ideas to senior leadership, though the CEO was aware of their activities and continuously stated that he was focused on IT-infra's learning practices.

Implementing Mictech's processes was not, however, the top priority for senior leaders. Instead, they had new priorities. First, they wanted to get an ISO-9001 certification—a quality management standard—that required a high level of process documentation and consistency by a company. Secondly, IT-infra's senior leadership focused on keeping the MS Gold partnership status that Mictech had and using it for the combined firm. This required IT-infra to have at least four experts in each expertise field; for those experts to keep their certification, they had to continue learning and applying new technologies in their fields. IT-

infra was short on such experts in several areas and needed to invest in recertifying its MS Gold partnership status in the areas in which Mictech had previously been certified.

By April 2011, the employee initiative group was finally ready to present its knowledge management plan—"IT-infra's Knowledge Management"—to IT-infra's senior leadership team. The team decided to engage Mictech's CTO, who was a member of the senior leadership team, as a spokesperson for their cause. As the team presented the plan, the senior leadership—especially the CEO—started seeing that implementing the new management plan and the associated PDP would help address many of the challenges associated with obtaining certifications. As a consequence of the meeting, the senior leadership decided to move forward with creating the expertise teams that would focus on specific technologies and allocate employees to these teams, as had happened previously within Mictech.

Management charged the four members of the initiative group to either lead an expertise team or focus on a specific product within one of the teams. Management charged the other two members with working through organizational issues involved in implementing learning practices. The designated leaders of the new expertise teams then recruited members for their teams, thereby recreating a matrix organizational structure that existed at Mictech, in which people worked both on client projects and expertise teams.

It was clear that to enhance the expertise team work, it was necessary to implement the PDP supporting it. However, the CEO argued that the firm could not afford to dedicate 20 percent of employees' time to learning activities. He reasoned that if employees were interested in having the latest technology skills they could do so partly on their own time "instead of watching TV." The CEO decreed that certain consultants could spend a maximum of 10 percent of their time on learning activities; other employees would have to settle for less. One of the technical consultants expressed employees' concerns:

> Well the biggest discussion is about the percentage of time that people get for knowledge management itself. A product lead gets 10 percent of his time, so that means that you are allowed to spend half a day a week on knowledge management, but a managed services person without a lead role would get 2.5 percent of his time, which is in practice just an hour a week! So that is quite limited.

Nonetheless, by August 2011, the newly implemented expertise teams' structure bore some fruit. One of the original IT-infra employees who was also a member of the employee initiative group and, therefore, part of an expertise team, was the first person in the Netherlands to get the "MS Certified Master" title for a particular new MS technology.

Together with others who have been certified in related technologies, he helped IT-infra obtain the MS Gold partner certification in this technical area.

Other aspects of Mictech's original learning capability were also slowly put in place. For example, employees slowly started using MS SharePoint for sharing all sorts of project documents, presentations, and white papers. The ISO-9001 certification goal facilitated the push toward documenting work through templates and sharing them throughout the organization, which created further incentives for using MS SharePoint too. The push for certification also led to the adoption of unified, consistent practices that were selected from both Mictech's and IT-infra's best practices. In adopting consistent practices, it became clear that IT-infra also had knowledge to contribute:

> During the … what is it called … the shared sessions related to the templates, it appeared that IT-infra also had templates which could be, at least, used as a best practice. That was, of course, a nice gain! (IT-infra's CEO)

Finally, the partnership with MS that had enabled Mictech to learn about the latest MS technologies through TAP sessions grew to include new participants from IT-infra:

> It [MS Exchange] has a TAP [for 2012]. So we will get the software in an early stage to use and test it. And, for a few [software packages], we can even start describing what the technology contains so that when it comes in the market during the year, we already have described everything and have a ready-to-use plan for the client. (Mictech's technical consultant)

Table 1, on the next page, provides an overview of practices implemented by the end of each phase. By December 2011, IT-infra got an ISO-9001 certificate and had been able to get and keep its Microsoft Gold partnership status in several areas. Although limited and not perfectly in line with the original Mictech approach, the employees had been able to engage in learning practices.

Table 1. Overview of key practices

Mictech's Key Practices for Learning New Technology	**By End of Phase 1**	**By End of Phase 2**
Strategic Sensing for Key Technologies	Only Mictech's CTO and IT-infra's Senior Leadership are involved in sensing trends	Mictech's CTO and Technical Consultant become owners of R&D plan
Expertise Teams	None	Implemented
Technology Training Sessions and Demos	Lectures on general topics not aligned with technical consultants' interests	Two types of talks: technology training sessions and demos as well as lectures on general topics
Testing Environment	Hardware bought	In use
Participation in Technology Adaptation Programs	Only by old Mictech employees	Participation by old Mictech and IT-infra employees because of MS Gold partnership status
Best Practice Documentation	Only by old Mictech employees	Greater use by old Mictech and IT-infra employees
Microsoft SharePoint	Only old Mictech and few IT-infra consultants	Old Mictech and IT-infra consultants
Personal Development Plan		
• Time to learn	• Reduced to almost zero	• Maximum of 10 percent across IT-infra
• Budget for training	• Old Mictech employees had more budget than IT-infra employees	• One budget for all employees, slightly smaller than Mictech
• Monetary rewards	• Only for old Mictech employees	• Some rewards for all Mictech and IT-infra employees

DISCUSSION

Analyzing the case study, we see that, in line with previous research, post-acquisition integration unfolds in two phases (Birkinshaw et al., 2000; Bresman et al., 1999, 2010; Schweizer, 2005). However, unlike prior studies, phase 1 did not include task integration leading to effective functioning of activities. Instead, phase 1 was characterized by failed attempts to transfer learning activities. Phase 2, in contrast, fell in line with prior research, and its activities led to a more successful transfer owing to human integration. Applying boundary spanning theories to analyze what happened, we can see that boundary spanning between the two organizations was not effective because of the lack of a joint new social

community. IT-infra did not create this new joint social community first because it lacked enabling resources (capital) for nominated employees to do their work and also become boundary spanners-in-practice.

From the initial acquisition, certain employees of Mictech and IT-infra, together with Mictech's CTO, were nominated to write an adjusted version of the R&D and PDP. These employees tried to implement parts of the R&D plan as far as their resources allowed them. However, the PDP was far from being implemented; therefore, one of the most important boundary objects was not being used at all because of a lack of economic capital. In other words, because of a lack of resources these artifacts did not become part of employees' practice and thus boundary objects-in-use. Hence, given that the nomination of boundary spanners involved only symbolic capital but no real economic capital, their attempts failed—they did not become boundary spanners-in-practice (Levina & Vaast, 2005, 2008). Mictech's CTO, who would have been a perfect boundary spanner, did not become a boundary spanner-in-practice. This is because, though Mictech's CTO knew the practice, he was more engaged in talks with the management and was put on thinking out complex assignments. This, in turn, led to Mictech's CTO not getting involved in IT-infra's practice and, thus, not becoming active because of a lack of economic capital. In addition, the nominated HR employee, who was not an expert in the technology field and was new to the firm, lacked the needed cultural and social capital to enable effective collaboration. Therefore, she was also not able to become a boundary spanner-in-practice. Furthermore, the CEO, being only a passive boundary spanner, was not able to solve any capability transfer issues during the first period. This was because, though mentioning the importance of Mictech's capability, the CEO did not know how the capability actually worked. Therefore, the CEO did not understand that for Mictech's capability to function, all the practices needed to be in place. Unfortunately, he did not become active in transferring the capability in question. Finally, not having the right boundary spanners-in-practice led to not creating the needed social community and artifacts in the first place. The poor attendance at knowledge sharing sessions and the lack of understanding of the value of the complex design of the testing environment created by Mictech's CTO showcased these issues.

At the end of the first phase, however, when employees started to value Mictech's approach and thus developed an inclination toward transferring Mictech's learning practices, they became boundary spanners-in-practice and created a boundary object-in-use (IT-infra's knowledge management plan). This was the beginning of a new joint post-acquisition social

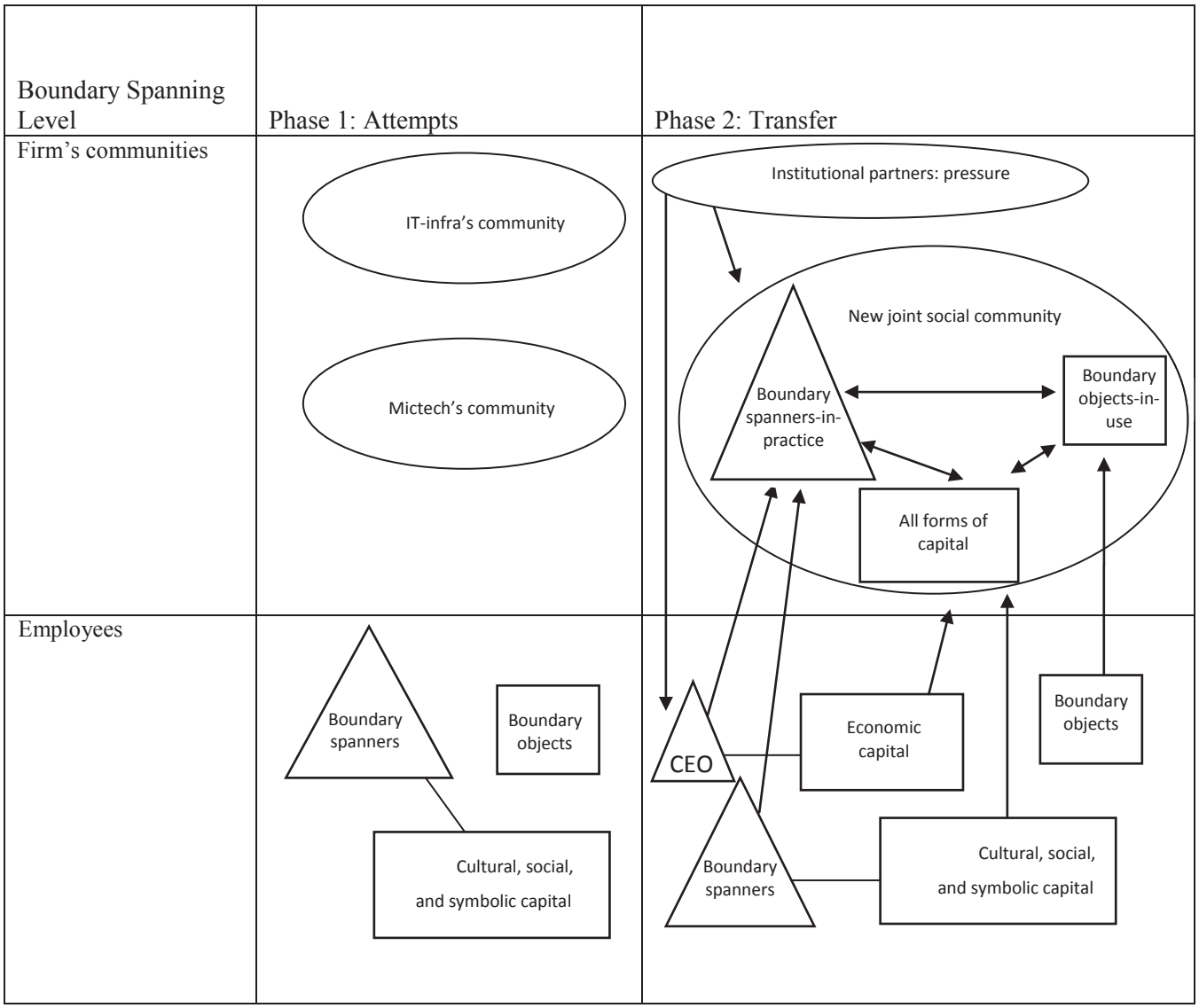
community (Levina & Vaast, 2005, 2008). This happened because the employees got to know each other's practice by being involved together in that practice. The change came about not so much because the employees developed the needed relationships to trust each other's abilities, as proposed in literature (Bresman et al., 1999, 2010); it happened because they gained insights into each other's work and began to appreciate it. More specifically, the taskforce for cloud computing led to the development of a social community which led to the transfer of Mictech's capability. Recognizing each other's work also led to socializing other employees into the new joint social community and, thus, stimulated it to grow. Therefore, it was in practice that these employees gained new tacit understanding of each other's expertise and the content of each other's abilities. Having this new joint social community enhanced the transfer of the capability. Therefore, to a certain degree, the enhanced social community itself could be seen as a boundary spanner.

In the second phase, the efforts of the boundary spanners-in-practice and the artifact they used—IT-infra's knowledge management plan—bore some fruit. The CEO started to change his position from passive to actively involved and decided, along with the other senior leadership, to implement Mictech's learning practices. The CEO became a boundary spanner-in-practice partly because the other boundary spanners had already created the practice. The CEO saw an opportunity and recognized the need for resources and boundary objects, which the boundary spanners lacked. He realized that to be effective, the boundary spanners needed economic capital and the implementation of the PDP. Therefore, in addition to deciding to implement Mictech's learning practices, the CEO was now willing to allocate resources for this cause. The most important resource was economic capital—that is, time. For this to happen, however, there needed to be some renegotiation of existing practices. For example, the CEO was willing to give employees 10 percent of their time for learning activities instead of the norm of 20 percent within Mictech. This situation, therefore, illustrates that a group of people were necessary to get access to all the required capital—symbolic, social, cultural, and economic. Furthermore, the CEO's change of position happened partly in response to external pressures. External business partners—specifically MS and the ISO-certification firm—led the CEO to develop an inclination toward implementing Mictech's learning practices and seeing boundary spanning as an opportunity. Hence, it was also partly because of external pressures from institutional partners that the CEO became a boundary spanner-in-practice. In addition, these institutional partners enhanced the further development and growth of the new joint social community by, for example, requiring a certain number of

experts for each expertise field. This led the social community to search for solutions to meet such requirements. On a macro level, one could view institutional partners—for example, MS—as a type of boundary spanner. Of course, boundary spanning is not the aim of these institutional partners—but more a side effect.

In sum, our study illustrates that the learning practices that functioned as the microfoundations of Mictech's capability were transferred by means of a new joint social community created through the efforts of the boundary spanners. These boundary spanners were able to stimulate the development of a new joint social community by having access to all forms of capital that were needed, which was only possible by having a group of people devoted to boundary spanning activities. In addition, these boundary spanners mutually developed boundary objects that were actually put to use and thus became boundary objects-in-use. Furthermore, pressures from institutional partners were also crucial in this process. These pressures encouraged the organization to allocate the necessary resources, and the new joint social community developed itself further. Figure 1, on the next page, illustrates the post-acquisition process that led to the creation of a new joint social community, as this section describes.

Figure 1. Post-acquisition social community development process



Implications for Theory and Research

Prior research on post-acquisition capability transfer has, until now, advocated for the importance of developing a post-acquisition social community, dealing with political and motivational issues, and supporting the managerial role (Birkinshaw et al., 2000; Bresman et al., 1999, 2010; Graebner, 2004; Graebner et al., 2010; Schweizer, 2005; Verbeke, 2010). Questions have lingered about how firms can develop such a post-acquisition social community, deal with political and motivational issues, and involve managers to enhance the development of a post-acquisition social community. In other words, what are the actual dynamics of post-acquisition boundary spanning? So far, the answer has seemed to reside within rich communication and leadership (Birkinshaw et al., 2000; Bresman et al., 1999, 2010; Cummings & Teng, 2003; Graebner, 2004; Graebner et al., 2010; Zander & Zander,

2010). Our study, however, illustrates that expertise-in-practice literature can inform post-acquisition integration literature to extend existing theory. In line with prior expertise-in-practice research, our study shows that to enhance collaboration, boundary spanners-in-practice are necessary (Levina & Vaast, 2005, 2008). Such boundary spanners could perhaps enhance the development of the needed relationships for reciprocal expertise transfer post-acquisition (Bresman et al., 1999, 2010). Therefore, post-acquisition human integration might not need to take six to seven years—as previous research has shown—when such boundary spanners-in-practice are in place (Birkinshaw et al., 2000). This is because transferring capabilities across boundaries, acquiring new tacit understanding, implementing new routines, developing new artifacts, and renegotiating some of the old power structures are necessary, which could be taken into account by such boundary spanners-in-practice (Carlile, 2002, 2004; Gherardi, 2000; Levina & Vaast, 2005, 2008; Orlikowski, 2002). Boundary spanners-in-practice do this by gaining understanding about the actual practice while building a new joint social community, implementing the routines underlying the capability, developing objects-in-use, and renegotiating power structures to move toward a new social order. In addition, having an inclination for boundary spanning is of utmost importance for boundary spanners to be willing to move the agenda forward and, thus, become boundary spanners-in-practice (Levina & Vaast, 2005). Furthermore, for these boundary spanners to become active, it is important that they make sense of the other firm's perspective (Vaara, 2003).

In our case, sense-making happened when employees got involved in the cloud computing taskforce. One of the results of this taskforce was that there was now a story to tell within the firm to try to socialize others within the new joint social community (e.g., Swap et al., 2001). Second, our case study shows that having a boundary object-in-use was probably, on a primary level, one of the first ways to make sure boundary spanners-in-practice remained involved (Barrett & Oborn, 2010; Nicolini et al., 2011). In other words, the momentum for these boundary spanners to become boundary spanners-in-practice might have been lost if the boundary object-in-use had not been created. Therefore, the interplay of boundary spanners-in-practice and a boundary object-in-use led to the development of a new joint social community post-acquisition (Levina & Vaast, 2005, 2008). For this to happen, the post-acquisition composition of the management team involved mattered (Ranft & Lord, 2002). This composition involved having boundary spanners-in-practice from both the acquired and acquiring firms, which together developed a new shared object and a new joint

social community. The boundary object-in-use had a practical and political use (Carlile, 2002, 2004). It was practical because it enhanced the development of a shared interpretation and inclination. It was political because it helped renegotiate a new order. This happened only after the boundary spanners together agreed on a mutually created boundary object; thus the boundary spanners established Mictech's way of working. In other words, the boundary object-in-use became valuable based on the boundary practice that was being carried out, which in this case was transforming the existing practices (Levina & Vaast, 2010).

An interesting aspect of this case is that the roles of acquired managers and, thus, the CTO, remained strong (Graebner, 2004; Graebner et al., 2010), even when the CTO was frustrated and did not want to get involved in transferring the capability in question (Kostova, 1999). However, it is important to note that it was possible to capitalize on the existence of the post-acquisition social community only after the CEO changed his position from being passive to being a boundary spanner-in-practice, which was partly a result of external pressures of business partners, an issue not discussed in literature.

Taking a bird's-eye view, one could argue that to a certain degree institutional partners acted as boundary spanners by pressuring the firms to take action and became effective in boundary spanning to keep these firms working according to their own standards. Therefore, the role of such institutional partners seems vital for boundary spanning research. Furthermore, CEO's early expressions of corporate commitment did not bear any fruit because they were organizationally hypocritical (Ranft & Lord, 2002; Vaara, 2003). Interestingly, however, the existence of such organizational hypocrisy probably helped the CEO keep his power—even when facing the more specific knowledge-based power of the managers (Vaara, 2003). This is because the existence of some forms of organizational hypocrisy actually helped create momentum and hope on the side of the managers by putting capability transfer on the agenda all the time. Finally, our research has shown that the initial boundary spanners lacked certain forms of capital and that it was only when the CEO became a boundary spanner-in-practice that they had access to all the required capital and, thus, in order to have access to all the required capital a group of people are needed.

These findings have some implications for research. Further research should reveal which combination of employees would be optimal to access all the required capitals, in order to enhance the development of a new joint social community. Further research should also reveal what the effect of such changing position of a boundary spanner could be on, for example, the social community that has been developed. Could it be that the social

community in question collapses in cases in which certain employees do not change position and thus, do not become boundary spanners-in-practice? Could it be that the social community refuses that certain employees change their position? In other words, how flexible or tolerant is the social community that is created. In addition, not much is known about the role of technology partners or other institutional players in this context. Further research should reveal what the role and impact of such external partners could be. Could it be that such partners can make or break the deal beyond any efforts of the firms involved? How much impact do they have? Could they speed up the post-acquisition phase by putting pressure on it? Or, are they just being used as a form of external symbolic and economic capital? One thing that is clear is that such institutional partners should be put on the post-acquisition integration and boundary spanning map.

In addition, an interesting issue is that it was only when the CEO allocated symbolic and economic capital that capability transfer started to take place. An interesting question is whether allocating resources right away could enhance the development of a social community and therefore also reduce the required time for post-acquisition capability transfer. Thus, could it be that capability transfer takes place within one phase instead of within two phases, when resources are in place and focused on social community development? Also here is a task for further research.

Furthermore, this case was focused on transferring a highly strategic capability. Given that the capability in question was highly strategic, the needed boundary spanners-in-practice had to be from senior leadership because high investments were involved. However, it could be that when transferring other types of capabilities such involvement of senior leadership is not required. Further research could elaborate more on the implications of transferring such strategic capabilities versus operational capabilities. Finally, as with any research our research has limitations too. Our findings are based on a single case study and limited observations. Future research should reveal whether the findings of this research are applicable to a broader context, that is, other firms and other industries.

Implications for Managers

This research has some implications for managers involved in post-acquisition integration. First, it is shown that developing a post-acquisition social community is of utmost importance for capability transfer as mentioned by previous research (Birkinshaw et al., 2000; Bresman et al., 1999, 2010; Verbeke, 2010). However, in developing such social

community our research suggests that beyond the important role of managers involved for dealing with political and motivational issues, it is important to have boundary spanners-in-practice and boundary objects-in-use, which could enhance the creation of a new joint social community (Levina & Vaast, 2005, 2008). While taking this into account, managers involved in post-acquisition integration should be aware that boundary spanners-in-practice might not work on a primary level because for these boundary spanners to remain active, appealing boundary objects are needed (Nicolini et al., 2011). These objects create the needed gravity for boundary spanners to remain active.

In addition, managers involved in post-acquisition integration should be aware that using various resources such as economic, cultural, social, and symbolic capital are needed in order for such boundary spanners-in-practice to be effective (Levina & Vaast, 2005, 2008). This is especially the case when the capability in question is of such strategic nature that requires involvement and endorsement of senior leadership. Furthermore, managers involved in post-acquisition integration should be aware of the interplay among various resources. Thus, for example, providing economic capital without any cultural, social, or symbolic capital and vice versa will probably not lead to the desired performance.

As a final note, managers involved in post-acquisition integration issues should be aware of the dominant logic involved (Verbeke, 2010). In capability-based acquisitions it is usually the capability of the target that the acquirer wants to transfer within its own firm. Therefore, the dominant logic would be to work according to the routines that have created the acquired firm's capability and thus, the logic of the acquired firm. Nonetheless, regardless of this dominant logic, many times the acquirer wants to institutionalize its own procedures to a certain degree within the target and thus, have its own logic as the dominant one (Verbeke, 2010). However, our study has shown that when aiming at acquiring strategic capabilities—that require transferring their underlying practices—a different logic could be at play. In such acquisitions, target's way of working will be imposed on a usually many times larger acquiring firm's workforce. Therefore, such acquisitions could bring along many more implications. Thus, caveat emptor.

CONCLUSION

In the broadest sense, our study shows that post-acquisition capability transfer can take place as long as a new joint social community is developed. This new joint social community, in turn, can be created if boundary spanners-in-practice exist, boundary objects-in-use are

created mutually by those who are part of the social community, and all the required resources are available. Also important in this process is the role of institutional partners in enhancing firms' boundary spanning activities. Post-acquisition integration literature has not considered these aspects until now. Recognizing their importance could help enhance our theoretical understanding of the phenomenon of post-acquisition capability transfer.

Furthermore, one would think that developing a social community by means of boundary spanners-in-practice, boundary objects-in-use, various types of capital, and recognition of the important role of institutional partners is a broad approach. However, when examined separately one might wonder why so many acquisitions fail to meet expectations. This is probably because, for firms involved, making a distinction between a boundary spanner and a boundary spanner-in-practice or a boundary object and a boundary object-in-use is quite difficult. The same holds for developing a social community and allocating resources. This study, however, has shown that post-acquisition capability transfer can take place as long as important practices are regarded as such. In line with this, this research has shown that for firms to enhance capability transfer, it is essential to involve employees who have an inclination toward collaboration for the transfer of the capability in question and have the necessary cultural and social capital and, thus, expertise and the needed social relationships, respectively. On top of this, firms involved in such acquisitions could help these employees become boundary spanners-in-practice by giving them the needed symbolic and economic capital. Firms can do this by nominating employees and giving them the needed time. In addition, for these boundary spanners-in-practice to remain active, firms must stimulate the development of a shared object that could become a boundary object-in-use with which they can identify themselves. Having these boundary spanners-in-practice collaborate while using their boundary objects-in-use could enhance the development of a post-acquisition social community that, with support from senior leadership, will help transfer the capability in question.

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APPENDIX

Table A1. Overview of interviewees

Company	Position	Number of Interviewees	Number of Interviews
IT-infra	CEO	1	2
IT-infra	Director	1	2
IT-infra	Project Manager	3	7
IT-infra	Technical consultant	8	16
Mictech	CEO	1	2
Mictech	CTO	1	3
Mictech	Account manager	1	2
Mictech	Technical consultant	7	13
		Total: 23	Total: 47